

arr = [1, 2, 2, 3, 7]

Output = 2

Duplicate Number
in an array

$n = 5$

0	1	2	3	4
1	2	2	3	7

Space
complexity
= $O(1)$

Pseudocode

Time
complexity
= $O(n^2)$

two
for loops

```

for (i = 0; i < n; i++)
{
    for (j = i + 1; j < n; j++)
    {
        if (arr[i] == arr[j])
        {
            print(arr[i])
        }
    }
}
    
```

i = 0	<u>arr(i) = 1</u>		
j = 1	j = 2	j = 3	j = 4
2	2	3	7

Duplicate
element

i = 1

arr(i) = 2 ✓

2

j = 2

j = 3

j = 4

✓ 2